

Remarks

Favorable reconsideration of this application is respectfully requested. The dependency of claim 13 is revised. Claim 13 now depends upon claim 11. Claim 20 is canceled without prejudice or disclaimer. Claim 24 is amended and supported for example at paragraph [0033] of Applicants' specification. Claim 29 is editorially revised so as to be consistent with claim 28. Claims 1-3, 10-19, and 21-40 are pending.

Drawing Objection

The drawings are objected to under 37 C.F.R. 1.83(a) for not showing every feature specified in the claims. Applicants respectfully request reconsideration of the objection.

The optical component for converting a polarization state is shown for example as the wavelength plate 10 in the embodiment illustrated in Fig. 1. Further, in paragraph [0028] of the specification for example, the function of the wavelength plate 10 is described in that the reproduction light 22b, when focused on the information recording medium 21, will be linearly polarized light and the recording light 22a will be circularly polarized light. Applicants respectfully submit that the features of claims 11, 22, and 24-40 are shown in the drawings.

Withdrawal of the objection is respectfully requested.

Claim Rejections under 35 U.S.C. § 112

Claims 1-3 and 10-40 are rejected under 35 U.S.C. 112, second paragraph as being indefinite. Applicants respectfully request reconsideration of the rejection.

Regarding claims 1, 10, and 21, Applicants respectfully submit that the wavelength plate 10 is not required in the invention of claim 1. As described in paragraph [0047] of Applicants' specification, the invention of claim 1 uses a semiconductor laser light source 24 that emits linearly polarized light with a wavelength λ_1 . However, the wavelength plate 10 is not necessary, as is further shown for example in the embodiment of Fig. 6, where no wavelength plate 10 is used. Claim 1 is definite.

Regarding claims 2 and 3, Applicants respectfully submit that these claims further define the characteristic of the polarized light component recited in claim 1. Namely, claim 2 recites that the polarized light component is linearly polarized light and claim 3 recites that the polarized light component is elliptically polarized light. Claims 2 and 3 do not merely recite functional language. Claims 2 and 3 are definite.

Regarding claims 24, the antecedent basis issue is corrected. Concerning the state of polarization of the reproduction light with respect to claim 24, as well as claims 11 and 22, claim 24 recites in the "whereby" clause that "the amplitude of a polarized light component of the reproduction light that is polarized perpendicular to the track direction is caused to be greater than that of other polarized light components compared with the state of polarization before the conversion. It is apparent that the state of polarized light is under a continuous conversion (e.g. switching) operation. That is, the state of polarization of the reproduction light undergoes conversion when it passes through the first optical component. Claims 24, and claims 11 and 22 are definite.

For at least the foregoing reasons, 1-3, and 10-40 are definite. Favorable reconsideration and withdrawal of the rejection are respectfully requested.

Claim Rejections under 35 U.S.C. § 103

Claims 1-3, 10, 13, 14, 16, 18, 19, 22, 24-27, 30, 31, 33, 35, 36, 39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama et al. (U.S. Application 2005/0058028) in view of Sugaya et al. (U.S. Patent 5,602,825). Applicants respectfully request reconsideration of the rejection.

Regarding claim 1, Aoyama et al. fails to teach a recording unit having a multilayer structure of recording layers as recited in claim 1. The Examiner contends that Fig. 4 shows a multilayer structure of recording layers. This is incorrect. The optical information record medium in Fig. 4 includes only a single recording layer, that is, a magneto optical recording film C. The other layers are a substrate A, dielectric films B and D, an aluminum reflecting film E, and a UV-cured film F as a protecting layer. See Fig. 4 and paragraph [0081] of Aoyama et al. However, layers A, B, D, E, and F are not recording layers and do not function as such. Thus, the optical information record medium of Aoyama is not capable of recording information three-dimensionally and

from which can be reproduced information recorded on one of recording layers through any of the other recording layer or layers. Sugaya et al. does not remedy these deficiencies. Consequently, the references cited do not disclose or suggest all of the features recited in claim 1. Claim 1 is patentable for at least the foregoing reasons.

Moreover, Aoyama fails to teach the information recording medium having a track pitch of no more than 1.3 times the wavelength λ_1 of the reproduction light. Aoyama states that the track pitch is 1.6 μm and wavelength of the laser beam is 785 nm (See paragraph [0090] of Aoyama et al.) Therefore, the track pitch is about 2.0 times the wavelength of the laser beam, which is significantly higher than the requirement of claim 1. The Office Action states that it would have been obvious to adapt Sugaya's track pitch in Aoyama's medium. Such a conclusion is unfounded. The present invention of claim 1 applies the track pitch as mentioned above so that the reproduction light affords a reduction in diffraction loss attributable to recording marks of any recording layers located in front of the recording layer where the information to be reproduced is recorded. As a result, information can be reproduced at a good signal-to-noise ratio even with an information recording medium in which information has been recorded three-dimensionally. (See e.g. [0013] and [0025] of Applicants' specification.) Notwithstanding the deficiencies of Aoyama et al. noted above, neither Sugaya et al., nor Aoyama et al. recognize such benefits and there is no reason to expect that one of skill in the art would look to use the track pitch of Sugaya et al. in the optical information recording medium of Aoyama et al. Consequently, claim 1 does not follow from the references cited.

Regarding claim 24, Aoyama et al. and Sugaya et al. do not disclose or suggest a recording unit having a multilayer structure of recording layers as noted above with respect to claim 1. For at least the same reasons specified for claim 1 above, claim 24 is patentable over the references cited.

Furthermore, the Office Action contends that with respect to claim 24, the optical component is an inherent feature within the laser light package for controlling the polarization of the emitted light beams. This conclusion is incorrect. Aoyama does not describe such a configuration and there is no reason to assume that Aoyama et al. satisfies the optical component as recited in claim 24. Moreover, Aoyama does not show or

suggest the feature of claim 24 that a first optical component is provided so as to convert the state of polarization of the reproduction light emitted from the first semiconductor laser light source. For at least the foregoing reasons, claim 24 does not follow from the references cited. Claim 24 is patentable.

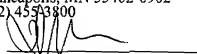
In view of the above amendments and remarks, Applicants respectfully request favorable reconsideration of this application in the form of a Notice of Allowance. If any questions arise regarding this communication, the Examiner is invited to contact Applicants' representative listed below.



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Respectfully submitted,

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